

REMARKS

Reconsideration and further examination of this application is hereby requested. Claims 1-162 are currently pending in the application. Claims 141-143 and 156-162 have been withdrawn from consideration as being directed to the non-elected inventions.

**A. The Obviousness Rejection of Claims 1-3, 5-7, 9-24, 28-38, 144-146, and 153**

Claims 1-3, 5-7, 9-24, 28-38, 144-146, and 153 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**A.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 1 recites the limitations

performing measurements on at least one of the communication path and the second node to produce measurement information in relation to said command information

at lines 6-8. The "second node" is recited as being "in a data network" (see lines 2-3), and the "command information" is recited as being sent "to the first node" in the traffic wireless

network (see lines 2 and 4). Independent claim 38 recites similar limitations.

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 3, lines 3-5. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach performing measurements on a communication path or a second node in a data network to produce measurement information in relation to command information sent to a first node in a traffic wireless network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are produced in relation to command information sent to a node in the wireless network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 1-3, 5-7, 9-24, 28-38, 144-146, and 153.

**A.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re*

*Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In Re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In Re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it

is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network. As evidence that *Feder* is not in the QoS field, it is noted that *Feder* does not disclose the sending of command information (as recited in claim 1) to enable QoS measurements, nor does *Feder* disclose the use of a back end processor (as recited in claim 38) to control a measurement system.

In contrast, the claimed invention recites "measuring" quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 1-3, 5-7, 9-24, 28-38, 144-146, and 153.

**A.3. Separate Patentability of Claims 10 and 12-16**

Concerning the limitations about measurements in connection with circuit switched data, SMS messages, wireless Internet access, wireless Internet transactions, e-commerce transactions, or push data, (refer to claims 10 and 12-16) the Examiner has

posited that since it is known that such measurements can be made that they must therefore be obvious choices within the level of ordinary skill in the art. However, simply because it is known how to do something does not *per se* make it obvious to implement the measurements in any context.

For these additional reasons, Applicant respectfully submits that claims 10 and 12-16 further define over the prior art of record.

**B. The Obviousness Rejection of Claims 4 and 8**

Claims 4 and 8 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881), and further in view of *Kikinis* (US 2002/0015398). This rejection is respectfully traversed, based on the following arguments.

Refer to section **A** of these Remarks for a detailed explanation of the deficiencies of the underlying combination of *Nilsen* and *Feder*. *Kikinis* is directed to a system that enables mobile telephony via a data network. *Kikinis* does not deal with interface of a wireless network with a data network. Rather, it overlays a wireless functionality onto a data network. Thus, further consideration of the *Kikinis* reference along with *Nilsen* and *Feder* does not provide sufficient teachings to rectify what is deficient about the *Nilsen/Feder* combination as explained in

section A.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 4 and 8.

**C. The Obviousness Rejection of Claims 25, 26, 80, and 81**

Claims 25, 26, 80, and 81 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose monitoring and benchmarking in relation to a WAP gateway. See the Office Action at page 9, lines 9-10. The Examiner notes that *Nilsen* discloses a TCP/IP connection and then summarily concludes that monitoring/benchmarking of WAP gateways would have been obvious. Rather than producing evidence concerning this aspect of the claimed invention, the Examiner takes Official Notice of the WAP gateway limitations are obvious based on disclosure of a TCP/IP connection.

Assertions concerning obviousness must be supported by

evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

Applicant respectfully requests that the Examiner provide evidence in support of the taking of Official Notice in this rejection.

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Furthermore, TCP/IP would not have implied WAP gateways. First, WAP is based on UDP/IP, not TCP/IP. Second, persons familiar with TCP/IP and wired LAN technologies would probably not have been knowledgeable about WAP at the time of the claimed invention. Thus the mere mention of a TCP/IP connection would not have risen to the level of being a sufficient suggestion of the concept of benchmarking a WAP gateway to make such obvious to those of ordinary skill in the art.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 25, 26, 80, and 81.

**D. The Obviousness Rejection of Claim 27**

Claim 27 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose accessing a portal from the Internet for the command and measurement information. See the Office Action at page 10, lines 1-2. Rather than producing evidence concerning this aspect of the claimed invention, the Examiner takes Official Notice of the obviousness of the recited portal limitations that are admitted by the Examiner not to be shown in *Nilsen*.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability, such as the motivation to modify the prior art, cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

Applicant respectfully requests that the Examiner provide



evidence in support of the taking of Official Notice in this rejection.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 27.

**E. The Obviousness Rejection of Claims 39, 41-45, 47-51, 53, 55-73, 76, 78, 79, 83, 85-87, 147, 148, and 154**

Claims 39, 41-45, 47-51, 53, 55-73, 76, 78, 79, 83, 85-87, 147, 148, and 154 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

**E.1. The Portal Limitation Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose the recited limitations of independent claim 42 concerning a portal for allowing customer access through the Internet. See the Office Action at page 10, lines 16-17. Rather than producing evidence concerning this aspect of the claimed invention, the Examiner takes Official Notice that such a modification so as to produce the recited limitations (that are

admitted not to be shown in *Nilsen*) would have been obvious.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

Applicant respectfully requests that the Examiner provide evidence in support of the taking of Official Notice in this rejection.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 39, 41-45, 47-51, 53, 55-73, 76, 78, 79, 83, 85-87, 147, 148, and 154.

**E.2. Separate Patentability of Claims 62 and 64-68**

Concerning the limitations about measurements in connection with circuit switched data, SMS messages, wireless Internet access, wireless Internet transactions, e-commerce transactions, or push data, (refer to claims 62 and 64-68) the Examiner has posited that since it is known that such measurements can be made that they must therefore be obvious choices within the level of ordinary skill in the art. However, simply because it is known how to do something does not *per se* make it obvious to implement

the measurements in any context.

For these additional reasons, Applicant respectfully submits that claims 62 and 64-68 further define over the prior art of record.

**F. The Obviousness Rejection of Claim 54**

Claim 54 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose that the respective traffic modem of the at least one traffic modem is the control link modem. See the Office Action at page 16, lines 17-18. Rather than producing evidence concerning this aspect of the claimed invention (which operations are performed by a modem), the Examiner takes Official Notice that modification of the prior art would have been obvious.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief

and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

Applicant respectfully requests that the Examiner provide evidence in support of the taking of Official Notice in this rejection.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 54.

**G. The Obviousness Rejection of Claim 88**

Claim 88 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose the control link using a wireless standard in relation to a geographic area of the associated remote unit. See the Office Action at page 17, lines 9-10. Rather than producing evidence concerning this aspect of the claimed invention, the Examiner makes a conclusory statement that the recited limitations that are untaught in the prior art would have

nevertheless been obvious. No evidence is cited in support of this statement.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 88.

**H. The Obviousness Rejection of Claims 89, 90, 92-96, 98-116, 118, 120, 121, 123-125, 149-152, and 155**

Claims 89, 90, 92-96, 98-116, 118, 120, 121, 123-125, 149-152, and 155 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**H.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Claim 89 recites the limitation

measuring data quality of service on a communication path between a first node in a traffic wireless network and a second node in a data network

at lines 3-5.

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 18, lines 5-7. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach measuring data quality of service on a communication path between a first node in a traffic wireless network and a second node in a data network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are indicative of data quality of service. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take quality of service measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a

node in the network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 89, 90, 92-96, 98-116, 118, 120, 121, 123-125, 149-152, and 155.

## **H.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In Re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In Re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed

invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 89, 90, 92-96, 98-116, 118, 120, 121, 123-125, 149-152, and 155.



### **H.3. Separate Patentability of Claims 105 and 107-111**

Concerning the limitations about measurements in connection with circuit switched data, SMS messages, wireless Internet access, wireless Internet transactions, e-commerce transactions, or push data, (refer to claims 105 and 107-111) the Examiner has posited that since it is known that such measurements can be made that they must therefore be obvious choices within the level of ordinary skill in the art. However, simply because it is known how to do something does not *per se* make it obvious to implement the measurements in any context.

For these additional reasons, Applicant respectfully submits that claims 105 and 107-111 further define over the prior art of record.

### **I. The Obviousness Rejection of Claim 97**

Claim 97 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose that the respective traffic modem of the at least one

traffic modem is the control link modem. See the Office Action at page 24, lines 5-6. Rather than producing evidence concerning this aspect of the claimed invention (which operations are performed by a modem), the Examiner takes Official Notice that modification of the prior art would have been obvious.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

Applicant respectfully requests that the Examiner provide evidence in support of the taking of Official Notice in this rejection.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 97.

**J. The Obviousness Rejection of Claim 126**

Claim 126 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) alone. This rejection is respectfully traversed, based on the following arguments.

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited

in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

The Examiner concedes that the *Nilsen* reference does not disclose the control link using a wireless standard in relation to a geographic area of the associated remote unit. See the Office Action at page 24, last two lines. Rather than producing evidence concerning this aspect of the claimed invention, the Examiner makes a conclusory statement that the recited limitations that are untaught in the prior art would have nevertheless been obvious. No evidence is cited in support of this statement.

Assertions concerning obviousness must be supported by evidence in order for an obviousness rejection to be legally sufficient. In an obviousness determination, a factual question material to patentability cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002).

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 126.

**K. The Obviousness Rejection of Claim 127**

Claim 127 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US

6522881). This rejection is respectfully traversed, based on the following arguments.

**K.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 127 recites the limitation

performing measurements on at least one of the communication paths and the second node, using the at least two of the plural remote units, to produce measurement information in relation to said command information

at lines 11-14. The "second node" is recited as being "in a data network" (see lines 3-4), and the "command information" is recited as being sent to "at least two of the plural remote units" in the traffic wireless network (see lines 2-3 and 6-7).

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 25, last 3 lines. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach performing measurements on a communication path or a second node in a data network to produce measurement information in

relation to said command information sent to a first node in a traffic wireless network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are produced in relation to command information sent to a node in the wireless network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 127.

**K.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is

non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits

that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 127.

**L. The Obviousness Rejection of Claim 128**

Claim 128 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**L.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 128 recites the limitation

performing one or more measurements of performance  
on at least one of the communication path and the  
second node to produce measurement information in  
relation to said command information

at lines 9-12. The "second node" is recited as being "in a data network" (see lines 3-4), and the "command information" is recited as being received "at the first node" in the traffic wireless network (see lines 2-3 and 5).

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 27, lines 3-5. To make up for this deficiency of *Nilsen*, the Examiner

relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach performing measurements on a communication path or a second node in a data network to produce measurement information in relation to said command information sent to a first node in a traffic wireless network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are produced in relation to command information sent to a node in the wireless network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 128.

**L.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In Re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If



it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In Re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality

of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 128.

**M. The Obviousness Rejection of Claim 129**

Claim 129 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**M.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 129 recites the limitations

performing measurements on at least one of the communication paths and the second node, using the at least two of the plural remote units, to produce measurement information in relation to said command information

at lines 6-16. The "second node" is recited as being "in a data network" (see line 4), and the "plural remote units" to which the

command information is sent are in the traffic wireless network (see lines 3-4).

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 28, lines 7-9. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach performing measurements on a communication path or a second node in a data network to produce measurement information in relation to said command information sent to a first node in a traffic wireless network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are produced in relation to command information sent to a node in the wireless network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 129.

**M.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re*

*Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In Re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In Re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it

is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 129.

**N. The Obviousness Rejection of Claims 130-133, 135, and 136**

Claims 130-133, 135, and 136 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**N.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 130 recites the limitation

means for obtaining measurements, at a statistically significant number of locations, of a performance parameter of at least one of the communications paths and the node on the data network

at lines 5-8, and it further recites the limitation

wherein the information consolidated by the means for consolidating provides an assessment of data quality of service for the at least one of the communication paths and the node on the data network

at lines 11-14.

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 29, lines 11-13. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach performing measurements on a communication path or a node in a data network to produce assessment of data quality of service for the communication path and the node on the data network. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements are indicative of data quality of service. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take quality of service

measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 130-133, 135, and 136.

**N.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is

non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits



that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 130-133, 135, and 136.

**O. The Obviousness Rejection of Claims 137 and 138**

Claims 137 and 138 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**O.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 137 recites the limitations

receiving response traffic over the wireless network from the node on the data network in reply to the test traffic;

recording measurement information comprising information regarding the test traffic, the response traffic, and location information contemporaneous with the step of receiving response traffic

at lines 25-32. Independent claim 138 recites similar limitations at lines 20-26.

The Examiner concedes that the *Nilsen* reference does not teach this limitation. See the Office Action at page 31, lines 13-15. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that

*Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach recording measurement information that includes information regarding test traffic, the response traffic (in reply to the test traffic), and location information contemporaneous with the receiving of the response traffic. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements include information regarding test traffic, the response traffic (in reply to the test traffic), and location information contemporaneous with the receiving of the response traffic.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 137 and 138.

**O.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if

the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In Re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 137 and 138.

**P. The Obviousness Rejection of Claims 139 and 140**

Claims 139 and 140 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881). This rejection is respectfully traversed, based on the following arguments.

**P.1. Limitations Not Taught**

In order for a patent claim to be obvious, the prior art must disclose or fairly teach each and every limitation recited in the claims. That is because the claim must be considered as a whole. It may not be distilled down to a "gist."

Independent claim 139 recites the limitations

receiving response traffic over the wireless network from the node on the data network in reply to the test traffic;

recording measurement information comprising information regarding the test traffic, the response traffic, and location information contemporaneous with the step of receiving response traffic;

at lines 22-29. Independent claim 140 recites similar limitations at lines 17-24.

The Examiner concedes that the *Nilsen* reference does not teach these limitations. See the Office Action at page 33, lines 5-7. To make up for this deficiency of *Nilsen*, the Examiner relies upon the teachings of *Feder*. The Examiner contends that *Feder* measures quality of service in a communication path between a wireless node and a data network node. However, *Feder* does not teach recording measurement information that includes information regarding test traffic, the response traffic (in reply to the test traffic), and location information contemporaneous with the receiving of the response traffic. Although *Feder* takes measurements in a wireless network, there is nothing in the *Feder* disclosure to indicate that any of those measurements include information regarding test traffic, the response traffic (in reply to the test traffic), and location information contemporaneous with the receiving of the response traffic.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 139 and 140.

**P.2. *Feder* Is Non-analogous Art**

It is well established that prior art is available for an obviousness combination only if it is "in the field of

applicant's endeavor or, if not then reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986) ("The determination that a reference is from a non-analogous art is therefore two fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." citing *In re Wood*, 599 F.2d 1032 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979)).

Applicant respectfully submits that the *Feder* reference is non-analogous art because it is neither within the field of endeavor of Applicant's invention nor pertinent to the problem Applicant faced in creating the claimed invention. The claimed invention measures quality of service in a wireless network. In contrast, *Feder* discloses an algorithm for selecting an access point in a wireless system based on RF conditions and load levels (see Abstract).

*Feder* is not directed toward a system for measuring quality of service (QoS) in a communication network. In *Feder*, the actual communication node (wireless modem 170) in the network merely takes RF and load measurements in effort to select the

optimal access point to communicate over. The objective in *Feder* is not to take QoS measurements of the wireless network (i.e., it is not directed at characterizing the wireless network), rather the objective in *Feder* is to take minimal measurements by a traffic node in the network as a precursor to sending real traffic from a node in the network.

In contrast, the claimed invention recites measuring quality of service in a wireless network (i.e., the claimed invention characterizes the wireless network), but the invention is not actually part of the communication system that is carrying the real traffic.

For these additional reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 139 and 140.

**Q. The Obviousness Rejection of Claim 77**

Claim 77 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Kikinis* (US 2002/0015398). This rejection is respectfully traversed, based on the following arguments.

The motivation to modify is not legally sufficient because it is based on circular reasoning. In essence the Examiner contends that it would have been obvious to modify *Nilsen* to use a wireless LAN device in order to include a wireless LAN device.

This begs the question as to why a person having ordinary skill in the art would have been motivated to make the modification of adding a wireless LAN device. No such motivation is evident in the prior art and the Examiner has not identified one that is not circular reasoning.

Furthermore, *Kikinis* is directed to a system that enables mobile telephony via a data network. *Kikinis* does not deal with interface of a wireless network with a data network. Rather, it overlays a wireless functionality onto a data network. Thus, further consideration of the *Nilsen* reference along with *Kikinis* does not provide sufficient teachings to rectify what is deficient about the obviousness rejection based on *Nilsen*, as explained in section **E** of these Remarks.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 77.

**R. The Obviousness Rejection of Claim 119**

Claim 119 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881) and *Kikinis* (US 2002/0015398). This rejection is respectfully traversed, based on the following arguments.

Refer to section **H** of these Remarks for a detailed explanation of the deficiencies of the underlying combination of



*Nilsen* and *Feder*. *Kikinis* is directed to a system that enables mobile telephony via a data network. *Kikinis* does not deal with interface of a wireless network with a data network. Rather, it overlays a wireless functionality onto a data network. Thus, further consideration of the *Kikinis* reference along with *Nilsen* and *Feder* does not provide sufficient teachings to rectify what is deficient about the *Nilsen/Feder* combination as explained in section **H**.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 119.

**S. The Obviousness Rejection of Claim 75**

Claim 75 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Barringer* (US 5675371). This rejection is respectfully traversed, based on the following arguments.

The *Barringer* reference is not directed to network testing. *Barringer* provides wireless telemetry via a cellular telephone network of power source status for cable television amplifiers. Thus, further consideration of the *Nilsen* reference along with *Barringer* does not provide sufficient teachings to rectify what is deficient about the obviousness rejection based on *Nilsen*, as explained in section **E** of these Remarks.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 75.

**T. The Obviousness Rejection of Claim 117**

Claim 117 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881) and *Barringer* (US 5675371). This rejection is respectfully traversed, based on the following arguments.

Refer to section **H** of these Remarks for a detailed explanation of the deficiencies of the underlying combination of *Nilsen* and *Feder*. The *Barringer* reference is not about network testing at all - it provides wireless telemetry via a cellular telephone network of power source status for cable television amplifiers. Thus, further consideration of the *Barringer* reference along with *Nilsen* and *Feder* does not provide sufficient teachings to rectify what is deficient about the *Nilsen/Feder* combination as explained in section **H**.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 117.

**U. The Obviousness Rejection of Claims 40, 52, 74, 82, and 84**

Claims 40, 52, 74, 82, and 84 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in

view of *Sant* (US 6169896). This rejection is respectfully traversed, based on the following arguments.

*Sant* is directed to comparison of voice call quality between plural wireless networks, but it does not address a communication path between a wireless network and a data network. Thus, further consideration of the *Nilsen* reference along with *Sant* does not provide sufficient teachings to rectify what is deficient about the obviousness rejection based on *Nilsen*, as explained in section **E** of these Remarks.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 40, 52, 74, 82, and 84.

**V. The Obviousness Rejection of Claims 122 and 134**

Claims 122 and 134 have been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US 6522881) and *Sant* (US 6169896). This rejection is respectfully traversed, based on the following arguments.

Refer to sections **H** and **N** of these Remarks for a detailed explanation of the deficiencies of the underlying combination of *Nilsen* and *Feder*. *Sant* is directed to comparison of voice call quality between plural wireless networks, but it does not address a communication path between a wireless network and a data network. Thus, further consideration of the *Sant* reference along

with *Nilsen* and *Feder* does not provide sufficient teachings to rectify what is deficient about the *Nilsen/Feder* combination as explained in sections **H** and **N**.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 122 and 134.

**W. The Obviousness Rejection of Claim 46**

Claim 46 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Gulledge* (US 5644623). This rejection is respectfully traversed, based on the following arguments.

The *Gulledge* reference is directed to simple drive testing to determine service quality in a cellular telephone network. Thus, further consideration of the *Nilsen* reference along with *Gulledge* does not provide sufficient teachings to rectify what is deficient about the obviousness rejection based on *Nilsen*, as explained in section **E** of these Remarks.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 46.

**X. The Obviousness Rejection of Claim 91**

Claim 91 has been rejected under 35 U.S.C. § 103(a) as being obvious over the *Nilsen* (US 5987306) in view of *Feder* (US

6522881) and *Gulledge* (US 5644623). This rejection is respectfully traversed, based on the following arguments.

Refer to section **H** of these Remarks for a detailed explanation of the deficiencies of the underlying combination of *Nilsen* and *Feder*. *Gulledge* is directed to simple drive testing to determine service quality in a cellular telephone network. Thus, further consideration of the *Gulledge* reference along with *Nilsen* and *Feder* does not provide sufficient teachings to rectify what is deficient about the *Nilsen/Feder* combination as explained in section **H**.

For the above reasons, Applicant respectfully submits that the PTO has failed to establish a *prima facie* case of obviousness with respect to claim 91.

**Y. The Indefiniteness Rejection**

Claim 127 has been rejected under 35 U.S.C. § 112, ¶ 2d as being indefinite. Claim 127 has been amended to clarify the claim language. Accordingly, Applicant respectfully submits that this rejection has been overcome by amendment.

**Z. Closing**

In view of the above, Applicant respectfully submits that independent claims 1, 25-27, 38, 42, 54, 80, 81, 88, 89, 97, 126-130, and 137-140 are patentable over the prior art of record. Applicant further submits that dependent claims 2-24, 28-37, 39-

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PATENT APPLICATION

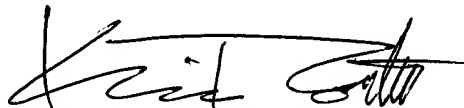
41, 43-53, 55-79, 82-87, 90-96, 98-125, 131-136, and 144-155 are patentable, at least as being dependent from patentable independent claims, and are further patentable due to the additional limitations recited therein.

For the above reasons, Applicant respectfully submits that the application is in condition for allowance. If there remain any issues that may be disposed of via a telephonic interview, the Examiner is kindly invited to contact the undersigned at the telephone number given below.

The Director of the U.S. Patent & Trademark Office is authorized to charge any necessary fees, and conversely, deposit any credit balance, to Deposit Account No. 18-1579.

Respectfully submitted,

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